PSYCHOSOCIAL FACTORS, ORAL HEALTH AND QUALITY OF LIFE IN ADOLESCENTS - A CONCEPTUAL MODEL USING LIFE COURSE HEALTH DEVELOPMENT PERSPECTIVE

SHORT SYNOPSIS

Submitted in partial fulfillment of the requirement of the degree of

DOCTOR OF PHILOSOPHY

To

Manav Rachna International Institute of Research and Studies

(Deemed to be University)

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CERTIFICATE

I hereby declare that the short synopsis "**Psychosocial factors, oral health and quality of life in adolescents - A conceptual model using life course health development perspective** " being submitted in partial fulfillment of the requirement for the degree of Doctor of Philosophy in Public Health Dentistry under Faculty of Dental Sciences of Manav Rachna International Institute of Research & Studies, Faridabad during the academic year **2022-23**. It is a bonafide record of original work carried out under the supervision of Dr. Meena Jain and has not been submitted in full or part to any other university or institute for degree or diploma and no work has been carried out on this proposal. Further, it is certified that short synopsis is plagiarism free and proof has been submitted.

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ABSTRACT

Life Course Health Development (LCHD) has been described as an approach designed to elucidate the process of health development spanned over an individual's lifetime owing to the effect of each life stage influencing the next ahead, and thus, all the different social, economic and physical environments together influences health and explain the need to understand health as a process, which begins early in childhood and continue throughout the lifespan of an individual over a life course. (Halfon & Hochstein, 2002).

Most of the oral diseases being multifactorial and chronic in nature, they tend to occur over a lifespan of an individual. This makes oral diseases perfectly balancing themselves with the life course concepts and hence, can be easily applicable to oral conditions. Adolescence is the life stage which is significantly influenced by many factors particularly the psychosocial and behavioural factors in the community at large. Studies have also shown that the adolescents' psychosocial factors, including sense of coherence influence the adolescent's behaviour leading to occurrence of oral diseases among adolescents. (Baxenovas, 2021)

Therefore, the present research proposal is designed to examine the major oral diseases affecting adolescents from a life course perspective, and assess the sense of coherence and its impact on OHRQoL across the life course of adolescents.

The study aims to assess psychosocial factors associated with the oral health and quality of life among adolescents in Modinagar, India.

Key words: adolescents, C-OIDP, pyschosocial factors, DMFT, gingival health

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INTRODUCTION

Life Course Health Development (LCHD) has been described as an approach designed to elucidate the process of health development spanned over an individual's lifetime owing to the effect of each life stage influencing the next ahead, and thus, all the different social, economic and physical environments together influences health and explain the need to understand health as a process, which begins early in childhood and continue throughout the lifespan of an individual over a life course. (Halfon & Hochstein, 2002).

LCHD provides a broader approach to understand how several biological, social, cultural, psychological, environmental factors, and critical life experiences, affect long-term health and disease outcomes throughout lifetime. (Halfon et al. 2014).

Most of the oral diseases being multifactorial and chronic in nature, they tend to occur over a lifespan of an individual. This makes oral diseases perfectly balancing themselves with the life course approach and hence the life course concepts can be easily applicable to oral conditions which looks upon social, economic, psychological and environmental factors as the roots of persistent inequalities in oral health (Buldur 2020).

By employing the concepts and principles of Life Course Health Development (LCHD) to conceptualize and articulate oral health, we have the opportunity to propel practitioners, researchers, policy makers, and the public beyond their conventional narrow emphasis on the mere physical aspects and functional aspects of oral structures and the clinical implications of oral/dental diseases. Instead, we can shift towards a fresh paradigm that wholeheartedly embraces the fundamental principles of LCHD and fosters the establishment of comprehensive policies and systems rooted in LCHD, aiming to enhance and optimize the oral health of both individuals and populations.

Adolescence is the life stage which is significantly influenced by many factors particularly the psychosocial and behavioural factors in the community at large. Studies have also shown that the adolescents' psychosocial factors, including sense of coherence influence the adolescent's oral health behaviour which in turn is significantly associated with the occurrence of oral diseases among adolescents (Baker, 2010).

As per the World Health Organization (WHO), oral health is an integral part of overall health and plays a vital role in its maintenance. The impact of oral health extends beyond the oral cavity, affecting general well-being and quality of life. Oral health issues can lead to significant pain, suffering, and discomfort, while also influencing one's ability to eat, speak, and ultimately impacting their overall quality of life and well-being. Recognizing the interconnectedness of oral health and overall health highlights the importance of prioritizing oral health care for individuals and populations. Hence, chronic diseases such as oral disorders can be studied using the LCHD approach which assesses the effects of psychosocial, behavioural and economic exposures right from gestation to post birth to adolescence/ young adulthood and its impact later on adult life. (Baxenovas,2017)

Though the interest in life course concepts has increased, a substantial portion of literature searches include studies with small sample sizes understanding focused on a single oral disease/ condition among the adult population. None of the studies have been done on the most crucial developmental stage of adolescence utilizing the LCHD approach/ perspective. The available literature has been found to be focusing only on cross- sectional data, or a narrow portion of the life span. Hence, the present study aims to focus on several oral conditions reported in adolescents and to develop a predictive model.

Therefore the present research proposal is designed to examine the major oral diseases affecting adolescents from a LCHD perspective, assess the impact of psychosocial factors on oral health and quality of life throughout the life course of adolescents.

LITERATURE REVIEW

Adolescence is a critical stage of development where psychosocial factors play a crucial role in shaping an individual's overall well-being, including their oral health condition and oral health-related quality of life (OHRQoL). Adopting a life course health development perspective allows for a comprehensive understanding of the interplay between psychosocial factors and oral health outcomes during this important period.

Research examining psychosocial factors and OHRQoL in adolescents has shed light on the multifaceted nature of this relationship. Several key psychosocial factors have emerged as influential determinants of OHRQoL. Positive social support and healthy peer relationships have been associated with improved OHRQoL in adolescents. Supportive relationships foster a sense of belonging, self-esteem, and social integration, which, in turn, contribute to better oral health outcomes and overall well-being. Adolescence is a time when body image concerns are heightened, and self-esteem can be significantly impacted. Negative self-perceptions, such as dissatisfaction with one's oral appearance, may negatively affect OHRQoL. Conversely, positive self-esteem and a healthy body image have been linked to higher OHRQoL scores. Psychological well-being, including mental health and stress levels, influences an adolescent's perception of their oral health. High levels of stress and poor mental health can lead to decreased oral health self-care behaviors, increased risk of oral diseases, and reduced OHRQoL. Socioeconomic factors, such as family income and parental education, play a significant role in shaping adolescents' OHRQoL. Adolescents from lower socioeconomic backgrounds may face barriers to accessing dental care, leading to poorer oral health outcomes and lower OHRQoL.

Baxevanos, K., Menexes, G., Lazaridou, A. et al. (2021)- A study was designed to analyse the relationships between psychosocial parameters, behavior patterns, and dental caries among adolescents in Greece. A conceptual model was designed that aimed to integrate SoC with the psychosocial factors. The study results revealed that psychosocial factors very well integrated with SoC and the model determined that various factors strongly influenced oral health behavior which in turn influences the occurrence of dental caries.

Baxevanos, K., Topitsoglou, V., Menexes, G., et al. (2017)- The research aimed to examine the psychosocial factors associated with TDI and its association with traumatic dental injuries

(TDI) in adolescents. The authors reported that Psychosocial factors significantly affect an adolescent's chances of having TDI. Factors associated with low experience of TDI include parental support, sense of coherence of self and mother and a higher socioeconomic status (SES).

Baker, S. R., Mat, A., Robinson, P. G. (2010)- conducted a research to assess the oral health status and quality of life along with psychosocial factors. The study involved collection at baseline and six months follow up data for psychological factors such as health locus of control, sense of coherence and self-esteem, social factors (parents' income and education), oral health behavior and beliefs/ perceptions, quality of life alongwith a clinical examination at baseline. Results revealed that more prevalence of dental caries and its associated symptoms were associated with functional limitation which in turn lowered the quality of life. The most important psychosocial predictor was SoC.

Buldur, B. (2020)- The study was done to assess the interrelationships between the parental and child's risk factors for caries and assessing the determinants of dental visit patterns within the population. A conceptual framework was developed comprising of oral health variables such as presence of dental caries, oral health patterns among children, child's dental visit and dental anxiety levels. Exogenous variables which were tested involved parental factors such as socioeconomic status, dental anxiety and oral health behaviours of parents, parenting style. The conceptual model was tested using path analysis involving a complex interplay of parental and child's determinants of oral health.

Colussi, P.R.G., Hugo, F.N., Wilker, F. (2017) designed a study to assess the impact of oral health on the quality of life of 15- 19 year old adolescents in Passo Fundo, Brazil. A structured questionnaire was applied, and an oral examination was performed, counting the number of teeth. Oral health-related quality of life was assessed by OHIP-14. Associations between quality of life and associated factors were analyzed. Age, ethnicity and studying in a public school were associated to the OHIP-14 score. Tooth loss was not associated with quality of life. Additionally, questions related to appearance, such as whether teeth appearance bothers the adolescent were not associated with quality of life. Attending a public school and self-reported halitosis were strongly associated to higher impact on quality of life. It was concluded that socioeconomic conditions and halitosis were associated to higher impact on quality of life of adolescents.

Gomes, A.C., Rebelo, M.A.B., Queiroz, A.C., et al (2019) This study assessed the relationships between socioeconomic status (SES), social support, oral health beliefs, psychosocial factors, health-related behaviours and health-related quality of life (HRQoL) in adolescents. Sociodemographic characteristics (sex, parental schooling, family income, household overcrowding and number of goods), social support (SSA questionnaire), oral health beliefs and psychosocial factors (Sense of Coherence [SOC-13 scale] and self-esteem [Rosenberg Self-Esteem Scale]), health-related behaviours (toothbrushing frequency, sedentary behaviour, smoking and sugar consumption) and HRQoL [KINDL questionnaire] were assessed at 6-month follow-up. Structural Equation Modelling assessed the relationships between variables. Greater social support, higher SOC, higher self-esteem, higher toothbrushing frequency and less smoking were directly linked with better HRQoL. SES, social support, oral health beliefs were indirectly linked to HRQoL. Higher SES directly predicted higher toothbrushing frequency and less smoking. Greater social support also directly predicted higher SOC, positive oral health beliefs and higher self-esteem. Greater social support indirectly predicted less smoking via oral health beliefs and less sugar consumption via SOC. Conclusion Socioeconomic status, social support, oral health beliefs and psychosocial factors were important predictors of adolescent's health behaviours and HRQoL over 6-month period through direct and indirect mechanisms. Health behaviours also directly infuenced HRQoL.

Jain, V., Agarwal, N., Jabin, Z., et al. (2020)- The research was aimed to create a Hindi version and validate CPQ11-14 among 11-14 years old children in North India. The results of the study indicated that a small percentage (3.6%) of individuals experienced a floor effect, indicating that some participants reported the lowest possible CPQ scores. However, no ceiling effect was observed, suggesting that there were no limitations in capturing the highest CPQ scores.
Furthermore, the study found that there was no significant change in CPQ scores when correlated with an increase in DMFT (Decayed, Missing, and Filled Teeth) scores. Based on the findings, the Hindi version of CPQ11-14 was deemed reliable for evaluating the OHRQoL among Hindi-speaking 11- 14 year olds in North India. Thus, it suggests that the questionnaire can effectively measure the impact of oral health on the well-being of these children.

Rodd, H.D., Marhsman, Z., Poritt, J. et al (2012) conducted a study to investigate the impact of dental conditions on children's oral health-related quality of life (OHRQoL). It aimed to explore how children's dental status, coping, and self- esteem influenced OHRQoL during transition to secondary school. All patients undergoing treatment at a UK Dental Hospital were given self-report questionnaires which obtained psychosocial data on self-esteem, coping styles and OHRQoL and were completed by children 3 months prior to secondary school entry and 3 months following

educational transition. Data were extracted from the clinical records of the paediatric patients who agreed to participate in the research. Multiple lagged regression analyses revealed that clinical variables and children's self- perception of their physical appearance were significant predictors of OHRQoL following transition to secondary school.

After reviewing the literature, one can understand that the impact of psychosocial factors on OHRQoL in adolescents from a life course health development perspective is vital for designing effective interventions. A substantial portion of literature searches include studies focused on a single condition, used cross-sectional data, or analyzed a relatively narrow portion of the life span and were based on relatively small sample sizes

However, what is lacking in the current review is the fact that the following review underscores the importance of considering psychosocial factors as integral components of oral health promotion efforts among adolescents which is needed to explore the complex interactions and long-term effects. Keeping this in mind, the current research proposal has been designed to focus on several oral conditions reported in adolescents and to develop a predictive model so that targeted strategies can be developed to promote positive psychosocial well-being, encourage oral health behaviors, and enhance overall OHRQoL in this critical developmental stage of adolescence.

DESCRIPTION OF BROAD AREA

Life Course Health Development (LCHD) are the concepts designed so as to elucidate the development of health processes spanned over lifetime in an individual owing to effect of each life stage influencing the next ahead, and thus, all the different social, economic and physical environments together influences health and explain the need to understand health as a process, which begins early in childhood and continue throughout the lifespan of an individual over a life course. (Halfon & Hochstein, 2002).

Most of the oral diseases being multifactorial and chronic in nature, they tend to occur over a lifespan of an individual. This makes oral diseases perfectly balancing themselves with the life course; hence, the life course concepts can easily apply to oral conditions. Adolescence is the life stage which is significantly influenced by many factors particularly the psychosocial and behavioural factors in the community at large. Studies have also shown that the adolescents' psychosocial factors, including sense of coherence influence the oral health behaviour which significantly influences the occurrence of oral diseases among adolescents. (Baxenovas, 2021)

Therefore, the present research proposal is designed to examine the major oral diseases affecting adolescents, assess the SoC and its impact on OHRQoL across life course among adolescents utilizing LCHD framework.

OBJECTIVES

1. To assess

(a) various oral health conditions in adolescents – dental caries, malocclusion, dental plaque, traumatic dental injuries and gingivitis.

(b) adolescents' SoC, social relationships and support, psychosocial variables, oral health behavioral variables

(c) OHRQoL among adolescents

2. To correlate

(a) oral health conditions with adolescent SoC, social variables and oral health behavioral variables

(b) OHRQoL with various oral conditions

3. To develop a framework based on above risk factors for oral health among adolescents

4. To include the above interrelationships into a conceptual model and analyse it statistically.

METHODOLOGY

Hypothesis of Research

Null Hypothesis (Ho): There will be no statistically significant difference in the influence of psychosocial factors on the oral health and quality of life of adolescents in accordance with life course health development perspective.

Alternative hypothesis (H_A): There will be statistically significant difference in the influence of psychosocial factors on the oral health and quality of life of adolescents in accordance with life course health development perspective.

The present study will be an observational correlational study conducted among 13 – 14 year old adolescents from government and public schools of Modinagar, Ghaziabad

Sample Size: The calculation took into account various factors. It considered a desired precision of 5%, a Z statistic of 1.96 corresponding to a 95% confidence level, an 80% power of the study, and a prevalence rate of 52% based on the findings of Pandey, P. et al (2021) regarding adolescents in India. These parameters were used to estimate the optimal sample size necessary for the study to achieve the desired level of precision and statistical power.

Based on the outcome, dental caries, using the formula,

$$\textbf{Sample size} = \frac{Z^2pq}{L^2}$$

Where:

Z= 1.96 for 95% confidence level

p = prevalence of dental caries = 52%

q=1-p

L = permissible error in the estimate of p

In the present study,

p= 52%

q= 48%

L= 5% of 52% = 2.60

So, sample size = $(4*52*48) / (2.60)^2$

Sample size = 1418.

Adjusting for an allowance of 10% missing data, the sample size will be rounded off to 1600 study subjects.

Consent : Official permission will be taken from the Block Education Officer, Bhojpur Block, Modinagar. Henceforth, permission will be taken from the heads of the selected schools and informed consent from each child's parent. Also, assent will be obtained from each study participant before conducting the investigation. The study will be conducted according to the ethical guidelines, approved by Institutional Ethical Committee (IEC), Manav Rachna Dental College, FDS.

SAMPLING METHODOLOGY: A probability based stratified random sampling will be done to obtain required number of schools and sample size.

SELECTION OF SCHOOLS: The Block Education Officer, Bhojpur Block, Modinagar, will provide a comprehensive list of schools, along with the number of students enrolled. Modinagar is divided into four blocks. Both government and public schools will be equally selected form all the four zones. One school of each type will be chosen using lottery method making a total of eight schools participating in the study.

SELECTION OF STUDY SUBJECTS: The study sample will be comprised of participants selected through simple random sampling from both government and public schools, ensuring an equitable representation. A total of 1600 study participants will be included, with 800 adolescents chosen from public schools and 800 adolescents from private schools in Modinagar. To maintain gender balance among the study subjects, equal numbers of boys and girls will be selected. Considering there are eight schools involved, 200 adolescents will be selected from each school.

Inclusion Criteria:

Children who have reached the age of 13 years and have not yet turned 15 years (age verification will be conducted using the school register).

Children who express willingness to participate in the study, with written informed consent obtained from their parents/guardians.

Children with permanent dentition only.

Exclusion Criteria:

Medically compromised children, including those with disabilities, limb deformities, and congenital defects.

Children with acute oral cavity infections that could interfere with the oral examination.

ORGANIZING THE SURVEY: A six-month timetable will be prepared to ensure systematic scheduling of the study. A detailed weekly and monthly schedule will be created well in advance, with consent obtained from the respective school authorities.

Before initiating the survey, the examiner will undergo training and calibration in the department

which will encompass the utilization of a structured proforma and intraoral examination for assessing various oral health conditions in adolescents. The examiner will practice on ten children aged 13-14 years. Subsequently, twenty subjects will be examined on two separate occasions over consecutive days. Intra-examiner reliability will be evaluated using the kappa statistic to assess the level of agreement in observations.

A well-structured proforma will be employed to collect information encompassing several factors. Sociodemographic factors such as name, age, gender, address, and family income will be recorded. Family-related factors including the occupation, education, and income of both parents, birth order, number of siblings, and family structure will be documented. Psychosocial factors, such as perceived parental support, perceived parental punishment, number of siblings, number of close friends, and habits of tobacco use or substance abuse (if any), will also be examined.

General and oral health-related factors will be assessed, including the frequency of sugar consumption, dietary habits, frequency of tooth brushing, use of oral hygiene aids, patterns of dental visits, and oral health preventive measures.

STUDY TOOLS: The following questionnaires will be used to assess the sense of coherence, oral health-related quality of life, and parental support/punishment.

Antonovsky's Sense of Coherence Scale: A shortened version of Antonovsky's Orientation to Life Questionnaire, the SOC-13, will be used to measure the SoC. The questionnaire consists of 13 questions with a score range of 13 to 91 points. It will be validated for north Indian adolescents, and a Hindi version will also be developed and validated for use in the Hindi-speaking population.

OHRQoL Using Child Perception Questionnaire: A 37-item questionnaire developed by Jokovic et al. will be used to assess OHRQoL. The frequency of specific experiences in the last three months will be recorded. A pre-validated questionnaire among the Hindi-speaking population by Jain et al. will be used in this research.

Social Support: Parental support/punishment will be assessed using a questionnaire derived from the Whitehall II study. A set of seven questions pertaining to parental support from both the mother and father will be used to gather information. The questionnaire used by Manoux, A. S. will be employed in this research and validated for the Hindi-speaking population.

Per capita income will be calculated by summing the monthly wages of all economically active family members and dividing this sum by the number of family members.

Socioeconomic status will be recorded according to Revised Kuppuswamy’s scale by Sood, P. (2022) which is based on education, occupation and income.

Instruments and supplies

The sufficient number of mouth mirrors, probes, explorers, gloves, motuhmask etc were used.

Nearly 50 sets of instruments will be used daily but sufficient number of instruments will be carried to avoid instrument shortage in case of emergency.

Infection control

The clinical examination will be carried out by the examiner following "Universal Precautions". All the instruments will be used once in a day and will be autoclaved using sterilization sleeve (with color coded marker strips on both sides) of 15 cm X 20 cm. Disposable gloves and mouth-masks were used.

Details of Interview and Clinical Examination

A structured questionnaire will be filled by the study subjects before the clinical examination. The questionnaire will be anonymous to maintain confidentiality of the study subjects. The proforma filled by the study subjects will then be checked to ensure completeness and minimize missing data. This will be followed by the clinical examination of the study subjects which will be filled in the proforma by the investigator herself.

The oral examination of school children will be carried out directly at their respective schools, employing standard dental instruments including a plain mouth mirror, explorer, and CPI probe. The examinations will be conducted under natural lighting conditions to ensure accurate and reliable assessments of oral health status (Type 3). Explorer will be used to remove debris from the tooth surfaces.

The following indices will be used to clinically record the oral health of adolescents.

1. **DECAYED, MISSING, FILLED TEETH INDEX (WHO CRITERIA 1997)**

Dental Caries status will be recorded as per Decayed, Missing, Filled Teeth Index (WHO criteria 1997) to assess all the 32 teeth (if present).

2. MALOCCLUSION will be recorded using IOTN-DHC index (Brook, P.H. & Shaw, W.C., 1989) which assesses objective needs for dental treatment.

3. GINGIVAL INDEX by Loe, H. & Sillness, G. (1963) will be used to assess gingival health at four sites on each tooth (buccal, mesiobuccal, distobuccal and lingual/ palatal).

4. TRAUMATIC DENTAL INJURIES affecting the maxillary and mandibular anterior teeth will be assessed using Ellis Classification by Ellis, R. G. (1945).

Appropriate referrals will be made for adolescents requiring dental treatment to Institute of Dental Studies & Technologies, Modinagar.

The data will be statistically analysed using SPSS version 27.0. Categorical variables will be presented in the form of numbers, percentages and continuous variables will be presented as mean and standard deviation. Appropriate statistical tests will be applied to find the associations among different variables. Significant associations will be entered into a regression model following which structural equation modelling will be employed to develop a framework for oral health in adolescents. A probability value of $p \leq 0.05$ will be established as level of significance.

EXPECTED OUTCOME OF THE RESEARCH

Adolescents in the younger age group face a greater influence on their oral well-being. A range of factors, such as previous instances of tooth decay, the DMFT index, cavities in primary teeth, dental injuries, bleeding gums, and malocclusion, have been associated with a decline in oral health-related quality of life (OHRQoL). These oral conditions typically arise during an individual's lifespan. Therefore, the current research will help to construct a predictive model that can assist in evaluating disease outcomes and their effects on the quality of life among the adolescent population.

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Researcher: **Dr. Shilpi Singh** Registration Number: **21/Ph.D/036**

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The complete report of the above Short Synopsis/Thesis has been reviewed and the similarity index is below the accepted norms as per the University Grants Commission (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulations 2018. The Short Synopsis/Thesis may be considered for further processing.

Research Scholar

Research Supervisor

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PSYCHOSOCIAL FACTORS, ORAL HEALTH AND QUALITY OF LIFE IN ADOLESCENTS - A CONCEPTUAL MODEL USING LIFE COURSE HEALTH DEVELOPMENT PERSPECTIVE

ORIGINALITY REPORT

4%	2%	6%	1%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	etheses.whiterose.ac.uk Internet Source	1%
2	Konstantinos Baxevanos, Georgios Menexes, Asimina Lazaridou, Trilby Coolidge, Vasiliki Topitsoglou, Sotirios Kalfas. "Dental caries and psychosocial factors: Testing a conceptual model in adolescents", Community Dentistry and Oral Epidemiology, 2021 Publication	1%
3	Bowling, Ann. "EBOOK: Measuring Health: A Review of Subjective Health, Well-being and Quality of Life Measurement Scales", EBOOK: Measuring Health: A Review of Subjective Health, Well-being and Quality of Life Measurement Scales, 2017 Publication	1%
4	Terja Ristkari, Andre Sourander, John A. Rønning, Georgios Nikolakaros, Hans	<1%

Helenius. "Life events, self-reported psychopathology and sense of coherence among young men—A population-based study", Nordic Journal of Psychiatry, 2009
Publication

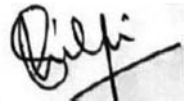
5	S.R. Baker, A. Mat, P.G. Robinson. "What Psychosocial Factors Influence Adolescents' Oral Health?", Journal of Dental Research, 2010 Publication	<1 %

Exclude quotes	On	Exclude matches	< 14 words
Exclude bibliography	On		

ANNEXURE 2

MANAV RACHNA DENTAL COLLEGE, FACULTY OF DENTAL SCIENCES, MRIIRS

PROTOCOL FOR IEC CLEARANCE

1. Full Title of Study:	Psychosocial factors, oral health and quality of life in adolescents- A conceptual model using life course health development perspective
2.1 Name & signatures of the candidate 2.2 Department 2.3 Degree/course 2.4 Batch of admission to course 2.5 Month & year of submission of thesis	2.1 Dr. Shilpi Singh  Signature 2.2 Department of Public Health Dentistry, Faculty of Dental Sciences 2.3 Doctor of Philosophy (PhD) 2.4 July 2021 2.5 February 2024
3. Name of Faculty & Department (Guide/Co-guide) 3.1 Dr. Meena Jain, Department of Public Health Dentistry, Faculty of Dental Sciences, MRDC	Signatures (Guide/Co-Guides) 3.1_____
4. Objectives of the study	4.1 To assess various oral health conditions in adolescents – dental caries, malocclusion, dental plaque and gingivitis. 4.2 To assess adolescents' sense of coherence, social relationships, social support, psychosocial variables and oral health behavioural variables 4.3 To correlate oral conditions with adolescent sense of coherence, social variables and oral health behavioral variables 4.4 To assess oral health related quality of life (OHRQoL) among adolescents 4.5 To correlate OHRQoL with various oral conditions 4.6 To include the above interrelationships into a conceptual model and analyse it statistically.

5. Why this study is required? Please provide brief justification.	A substantial portion of literature searches include studies focused on a single condition, used cross sectional data or analysed a relatively narrow portion of life span and were based on relatively small sample sizes. The present study aims to focus on several oral conditions reported in adolescents and to develop a predictive model.
6. Methodology	6.1. Number of Patients: 1600 **Sample Size:** The sample size was calculated allowing for a 5% precision, a Z statistic of 1.96 for 95% confidence level, 80% power of the study and a prevalence of 52% based on the results of Pandey, P. et al (2021) among adolescents in India. **The article is cited as:** Pandey, P., Nandkeoliar, T., Tikku, A.P., Singh, D., Singh, M.K. (2021). Prevalence of dental caries in the Indian population: A systematic review and meta-analysis. *Journal of International Society of Preventive and Community Dentistry*, 11, 265.256- Based on the outcome, dental caries, using the formula, $$\text{Sample size} = \frac{Z^2pq}{L^2}$$ Where: Z= 1.96 for 95% confidence level p = prevalence of dental caries = 52% q=1-p L = permissible error in the estimate of p In the present study, p= 52% q= 48% L= 5% of 52% = 2.60 So, sample size = $(4*52*48) / (2.60)^2$ Sample size = 1418 Adjusting for an allowance of 10% missing data, the final sample size will be rounded off to 1600 study subjects. 6.2 **Inclusion Criteria:** • Children who have completed the chronological age of 13 years and should not have completed 15 years of age will be included in the study (the study subjects' age will be verified from the school register). • Children willing to participate in the study and whose parents/ guardian will sign the written informed consent • Children with permanent dentition only will be included in the study.

6.3. **Exclusion Criteria:**

- Children who are medically compromised, handicapped, limb deformities/disability and those with congenital defects.
- Children with acute infections of the oral cavity which interfered with the oral examination will be excluded from the study.

6.4. Study design - Cross sectional Analytical

6.5 Brief Methodology

SAMPLING METHODOLOGY: A stratified random sampling technique will be employed to select the required number of schools and the sample size.

FIRST STAGE (SELECTION OF SCHOOLS)

A complete list of schools alongwith the number of 13 year olds enrolled will be obtained from the Office of the Block Education Officer, Bhojpur Block, Modinagar. Schools in Modinagar will be selected using a two-stage cluster random sampling technique. In the first stage, Modinagar city will be divided into 4 geographical areas arbitrarily from which equal number of both public and private schools will be included. Each zone has 2 public schools and 3 private schools except one where 4 private schools are located. In order to have equal representation of both types of schools, random sampling by lottery method will be done. One school of each type will be selected making that a total of eight schools to be included in the study.

SECOND STAGE (SELECTION OF STUDY SUBJECTS)

The study subjects will be taken in equal proportion using **simple random sampling** from both the government and private schools for equal representation in the study sample. Out of 1600 study participants, 800 adolescents will be obtained from public schools and 800 adolescents from private schools of Modinagar. Due consideration will be given to maintain the equal number of boys and girls among the study subjects. Since the total study population of 1600 will be obtained from 8 schools, hence 200 adolescents will be taken from each school.

4. Organising the survey

Preparing a survey protocol

A time table will be prepared and the study will be systematically scheduled to spread over a period of six months. A detailed weekly and monthly schedule will be prepared well in advance by informing and obtaining consent from authorities of respective schools.

Training and Calibration of examiner

Before conducting the survey, the training and calibration of examiner will be done in the Department of Public Health Dentistry, Manav Rachna Dental College, FDS. Training for the use of structured proforma, intraoral examination for various oral health conditions in adolescents will be done on 10 children aged 13-14 years. Subsequently, a total of 20 subjects will be examined on two occasions over 2 successive days. Intra-examiner reliability will be assessed using kappa statistic, to assess the degree of conformity in the observations.

5. Implementing the Survey

Consent : Prior to the start of the study, an official permission will be obtained from the Block Education Officer, Bhojpur Block, Modinagar. Henceforth, permission to examine the school children will be obtained from the heads of the selected schools and informed consent will be taken from each child's parent for the interview and oral examination. Also, assent will be obtained from each study participant before conducting the investigation. The study will be conducted according to the ethical guidelines, approved by Institutional Ethical Committee (IEC), Manav Rachna Dental College, FDS.

Structured Questionnaire

A well structured proforma will be used to collect information regarding:

5. Sociodemographic factors like name, age, gender, address and family income.
6. Family related factors like father's and mother's occupation, education, family income, birth order, number of siblings and family structure.
7. Psychosocial factors such as perceived parental support, perceived parental punishment, number of siblings, number of close friends, habits such as tobacco use or substance abuse (if any)
8. General and oral health related factors like frequency of sugar consumption, dietary habits, frequency of tooth brushing, use of oral hygiene aids, sugar consumption, pattern of dental visits and oral health preventive measures will also be assessed.

Both open ended and close ended questions will be used to derive the required information from the students.

STUDY TOOLS: The following questionnaires will be used to assess the sense of coherence, oral health related quality of life and parental support / punishment.

1. **Antonovsky's sense of coherence scale:** Antonovsky (1987) developed a questionnaire to measure the sense of coherence. The original form, the Orientation to Life Questionnaire, consists of 29 items, 11 items measuring comprehensibility, 10 items measuring manageability, and 8 items measuring meaningfulness. The response alternatives are a semantic scale of 1 point to 7 points, where 1 and 7 indicate extreme feelings about questions (and statements) about how one's life is experienced (e.g., 'when you talk to people, do you have the feeling that they do not understand you?' is scored from 1 = never have this feeling to 7 = always have this feeling). A shorter version of 13 questions (SOC-13) of the original form was developed by Antonovsky (1987), where the score ranges between 13 and 91 points and will be used in this research. The scale will be validated for north Indian adolescents and the hindi version will also be developed and validated for use in hindi speaking population. (Antonovsky, 1987)

2. **OHRQoL Using Child Perception Questionnaire :** The 37-item questionnaire originally developed by Jokovic et al (2002) consists of four conceptual domains: (a) oral symptoms (OS, 6 items), (b) functional limitations (FL, 9 items), (c) emotional well-being (EWB, 9 items), and (d) social well-being (SWB, 13 items). The children will be asked to specify the frequency of a particular experience in the last 3 months. A pre validated questionnaire

29

among Hindi speaking population by Jain,V. et al. (2020) will be used in the present research.

3. **Social support to be assessed through Parental Support/Punishment questionnaire derived from Whitehall II** – A set of seven questions pertaining to parental support of both mother and father will be used to elicit information regarding parental support/ punishment. The questionnaire used by Manoux, A. S. (2006) will be used in the present research and will be validated for the hindi speaking population.

Per capita income would then be calculated by adding the monthly wages of all economically active members of the family and by dividing this sum by the number of family members. Socioeconomic status will be recorded according to Revised Kuppuswamy's scale by Sood, P. (2022) which is based on education, occupation and income.

A) Education	**Score**
1. Professional or Honours	7
2. Graduate or Post-Graduate	6
3. Intermediate or Post-High-School Diploma	5
4. High School Certificate	4
5. Middle School Certificate	3
6. Primary School or Literate	2
7. Illiterate	1

B) Occupation	**Score**
1. Profession	10
2. Semi-Profession	6
3. Clerical, Shop-owner, Farmer	5
4. Skilled Worker	4
5. Semi-Skilled Worker	3
6. Unskilled Worker	2
7. Unemployed	1

Multiplying the income scale values for the year 2012 by the conversion factor of 6.12 will result in an updated Modified Kuppuswamy socioeconomic scale for the year 2022, where b is CPI of current year and a is CPI of last year.

$Inflation\ rate$=[$(b-a/a)\times 100$] where b is CPI of current year and a is CPI of last year.

Subsequently, all income groups will be multiplied with conversion factor to get appropriate income groups.

C) Family Income Per Month (Rs)			
	Year 2012	**Year 2022**	**Score**
		(Rounded off to nearest 50)	
1.	≥ 30375	≥ 185895	12
2.	15188-30374	92951-185894	10
3.	11362-15187	69535-92950	6
4.	7594-11361	46475-69534	4
5.	4556-7593	27883-46474	3
6.	1521-4555	9308-27882	2
7.	≤ 1520	≤ 9307	1

Based on the scores, socioeconomic status will be classified as under:

Total score	Socio-Economic Class
26-30	Upper (I)
16-25	Upper Middle (II)
11-15	Lower Middle (III)
5-10	Upper Lower (IV)
< 5	Lower (V)

Instruments and supplies

The following instruments and supplies were used:

11. Plane mouth mirrors
12. CPI probes
13. Explorers
14. Pair of tweezers
15. Kidney trays (one for used instruments and one for sterilized instruments)
16. Cloth hand towels
17. Gauze and cotton
18. Gloves and mouth masks
19. Disinfectant solution for used instruments: Dettol (4.8% Chloroxylenol, 9% Terpineol and 13.1% Denatured alcohol)
20. Disinfectant solution for hand washing

A total of 50 sets of instruments will be used per day but sufficient number of instruments will be carried to avoid instrument shortage in case of emergency.

Infection control

The clinical examination will be carried out by the examiner following "Universal Precautions". All the instruments will be used once in a day and will be autoclaved using sterilization sleeve (with color coded marker strips on both sides) of 15 cm X 20 cm. Disposable gloves and mouth-masks were used.

Details of Interview and Clinical Examination

A structured questionnaire will be filled by the study subjects before the clinical examination. The questionnaire will be anonymous to maintain confidentiality of the study subjects. The proforma filled by the study subjects will then be checked to ensure completeness and minimize missing data. This will be followed by the clinical examination of the study subjects which will be filled in the proforma by the investigator herself. A maximum of 40 study subjects will be examined per day.

The children will be made to sit on the chair and the oral **e**xamination of study subjects will be conducted in respective schools using a plane mouth mirror, explorer and CPI probe under natural light (Type 3). Explorer will be used to remove debris from the tooth surfaces.

The following indices will be used to clinically record the oral health of adolescents.

1. **DECAYED, MISSING, FILLED TEETH INDEX (WHO CRITERIA 1997)**

Dental Caries status will be recorded as per Decayed, Missing, Filled Teeth Index (WHO criteria 1997) to assess all the 32 teeth (if present).

DECAYED:

- Lesion in a pit or fissure, or on a smooth tooth surface, that has an unmistakable cavity.
- Undermined enamel
- Detectably softened floor or wall
- A tooth with temporary filling.

MISSING: missing due to caries

FILLED: filled due to caries

2. MALOCCLUSION will be recorded using IOTN-DHC index (Brook, P.H. & Shaw, W.C., 1989) which assesses objective needs for dental treatment.

It records only the worse occlusal feature on a hierarchical scale:

1- Missing teeth (including developmental absence, ectopic and impacted teeth)

2- Overjet (including reverse Over jet)

3- Crossbites

4- Displacement of contact points

5- Overbites (including open bites)

DENTAL HEALTH COMPONENT (DHC)

Grade 1 (No Need)- Extremely mild malocclusions including contact point displacements<1 mm

Grade 2 (Little Need)-

2.a Increased OJ > 3.5 mm ≤ 6 mm with competent lips

2.b Reverse OJ > 0 mm ≤1 mm

2.c Anterior/posterior crossbite ≤ 1 mm discrepancy RCP-ICP

2.d Contact point displacements > 1 mm ≤ 2 mm

	2.e Anterior/posterior openbite > 1 mm ≤ 2 mm 2.f Increased OB ≥ 3.5 mm without gingival contact 2.g Pre-normal/post-normal occlusions with no other anomalies **GRADE 3 (Moderate Need)** 3.a Increased OJ > 3.5 mm but ≤ 6 mm with incompetent lips 3.b Reverse OJ > 1 mm but ≤ 3.5 mm 3.c Anterior/posterior crossbites > 1 mm ≤ 2mm discrepancy between RCP- ICP 3.d Contact point displacements > 2 mm ≤ 4 mm 3.e Lateral /anterior open bites > 2 mm ≤ 4 mm 3.f Deep OB complete to gingival or palatal tissues but non traumatic **GRADE 4 (Great Need)** 4.a Increased OJ > 6 mm ≤ 9 mm 4.b Reverse OJ > 3.5 mm but no masticatory/speech problems 4.b Reverse OJ > 1 mm < 3.5 mm with masticatory/speech problems 4.c Anterior/posterior crossbites > 2 mm discrepancy between RCP – ICP 4.d Severe contact point displacements > 4 mm 4.e Extreme lateral or anterior openbites > 4 mm 4.f Increased/complete OB with gingival/palatal trauma 4.g Posterior lingual crossbites with no functional occlusal contact in one or both buccal segments 4.h Less extensive hypodontia requiring prerestorative ortho/or ortho space closure to obviate need for prosthesis 4.i Partially erupted teeth, tipped/impacted against adjacent teeth 4.j Supernumerary teeth **GRADE 5 (Very Great Need)** 5.a Increased OJ > 9 mm 5.m Reverse OJ > 3.5 mm with reported masticatory/speech problems 5.b Impeded eruption of teeth (except for third molars) due to crowding, displacement, supernumerary teeth, retained deciduous teeth and pathology. 5.c Extensive hypodontia with restorative implications (more than 1 tooth missing in any quadrant) requiring prerestorative orthodontics 5.d Cleft lip/palate and other craniofacial anomalies 5.e Submerged deciduous teeth (2 cusps visible or severe tipping adjacent teeth) **3. GINGIVAL INDEX** by Loe, H. & Sillness, G. (1963) will be used to assess gingival health at four sites on each tooth (buccal, mesiobuccal, distobuccal and lingual/ palatal).

0 = Normal gingiva

1 = Mild inflammation — slight change in color, slight oedema, no bleeding on probing

2 = Moderate inflammation—redness, oedema and glazing, bleeding on probing

3 = Severe inflammation — marked redness and oedema, ulceration, tendency to spontaneous bleeding.

4. TRAUMATIC DENTAL INJURIES affecting the maxillary and mandibular anterior teeth will be assessed using Ellis Classification by Ellis, R. G. (1945).

Class 1: Fracture of enamel only
Class 2: Fracture of enamel and dentine, without pulp involvement
Class 3: Fracture of enamel and dentine with pulp involvement
Class 4: Discoloration of the tooth as a result of concussion to the tooth, with or without a sinus tract
Class 5: Displacement, extrusion, intrusion and lateral displacement
Class 6: Tooth loss as a result of trauma
Class 7: Tooth restored by composite or crown restoration following fracture.
Class 8: Fracture of the crown en masse and its replacement
Class 9: Traumatic Injury to primary dentition

Referral

Appropriate referrals will be made for adolescents requiring dental treatment to Institute of Dental Studies & Technologies, Modinagar.

Statistical Analysis

Data will be entered into Microsoft excel and statistical analysis will be done using Statistical Package for Social Sciences version 27.0 (IBM SPSS Statistics for Windows, Version 27.0. Armonk, NY: IBM Corp). Categorical variables will be presented in the form of numbers, percentages and continuous variables will be presented as mean and standard deviation. Appropriate statistical tests will be applied to find the associations among different variables. Significant associations will be entered into a regression model following which structural equation modelling will be employed to develop a framework for oral health in adolescents. Significance for all statistical tests will be predetermined at a probability value of 0.05 or less.

7. Permission from Drug Controller General of India (DCGI)	1. ☐ Required 2. ☑ Not required 3. ☐ Received 4. ☐ Applied when:
8. Permission from DGFT , if required	1. ☐ Required 2. ☑ Not required 3. ☐ Received 4. ☐ Applied when:
9. a) Safety measures for proposed interventions b) Results of relevant laboratory tests c) Result of studies in human	a)_____ b)_____ **Baxevanos, K., Menexes, G., Lazaridou, A. et al. (2021)**- A study was designed to analyse the relationships between psychosocial factors, health behavior patterns, and dental caries among adolescents in Greece. A conceptual model was designed that aimed to integrate SoC with the psychosocial factors. The study results revealed that psychosocial factors very well integrated with SoC and the model determined that various factors strongly influenced oral health behavior which in turn influences the occurrence of dental caries. **Baxevanos, K., Topitsoglou, V., Menexes, G., et al. (2017)**- The purpose of the study was to examine the psychosocial factors associated with TDI and its association with traumatic dental injuries (TDI) in adolescents. The authors reported that Psychosocial factors significantly affect an adolescent's chances of having TDI. Factors associated with low experience of TDI include parental support, sense of coherence of self and mother and a higher socioeconomic status (SES). **Buldur, B. (2020)**- The study was done to assess the interrelationships between the parental and Child's risk factors of dental caries and assessing the determinants of dental visit patterns among children. A conceptual framework was developed comprising of oral health variables such as presence of dental caries, oral health patterns among children, child's dental visit and dental anxiety levels. Exogenous variables which were tested involved parental factors such as socioeconomic status, dental anxiety and oral health behaviours of parents, parenting style. The conceptual model was tested using path analysis involving a complex interplay of parental and child's determinants of oral health.

10. Plans to withdraw standard therapy in research	Yes No Remarks: Not Applicable
11. Plan for provision of coverage for medical risk	Patients requiring dental treatment will be referred to Institute of Dental Studies & Technologies, Modinagar for free dental treatment, if any.
12. How you will maintain Confidentiality of subject?	The questionnaires which will be filled by the participants will be anonymous.
13. Costs Involved (Appx. in Rs.) 13.1 Investigations 13.2 Disposables 13.3 Implants 13.4 Drugs / Contrast Media Who will bear the costs of the requirements?	Rs 25,000/- 1. Patient 2. Protocol Exempted 4. Other Agencies (Name)_____

14. Participant Information Sheet *(mark √ if yes)*	[√] Attached English [√] version Attached [√] Hindi version
15. Participant Informed Consent Form *(mark √ if yes)*	[√] Attached English version [√] Attached Hindi version [√] Certified that Hindi version is a true translation of English version
16. Whether any work on this Protocol has started or not?	*(mark √ if yes, X if no)* (Please enclose a separate certificate to this effect).
17.Attached documents (If any)	17.1 In case of multicentric study, IEC clearance of other centres must be provided

ANNEXURE 3

PARTICIPANT INFORMED CONSENT FORM (PICF)

Protocol / Study number :_____

Participant identification number for this trial: _____

Title of project: Psychosocial factors, oral health and quality of life in adolescents - A conceptual model using life course health development perspective

Name of Principal Investigator: Dr. Shilpi Singh Tel.No(s). 8307591176

The contents of the information sheet dated that was provided have been read carefully by me/ explained in detail to me, in a language that I comprehend, and I have fully understood the contents and I consent for my child to partcipate in this study. I confirm that I have had the opportunity to ask questions.

The nature and purpose of the study and its potential risks / benefits and expected duration of the study, and other relevant details of the study have been explained to me in detail. I understand that my child participation is voluntary and that I am free to withdraw my child at any time, without giving any reason, without my medical care or legal right being affected.

I understand that the information collected about my child in this research and sections of any of the medical notes may be looked at by responsible individual, Dr. Shilpi Singh. I give permission to her to have access to my child records, to present in meetings & conferences, publish if desired.

I give consent for my child to take part in the above study.

(Signatures / Left Thumb Impression of the Parent /Guardian) Date:
Place:

Name of the Participant:_____
Son/ Daughter of: _____
Complete postal address: _____

This is to certify that the above consent has been obtained in my presence.

Signatures of the Principal Investigator Date:
Place:

1) Witness – 1

Signatures
Name:
Address:

2) Witness – 2

Signatures
Name:
Address:

ANNEXURE - 4

सहभागी सुचित सहमति प्रपत्र

इस परीक्षण के लिए प्रतिभागी पहचान संख्या _____

परियोजना का शीर्षक: किशोरों में मनोसामाजिक कारक, मौखिक स्वास्थ्य और जीवन की गुणवत्ता - जीवन पाठ्यक्रम स्वास्थ्य विकास परिप्रेक्ष्य का उपयोग करते हुए एक वैचारिक मॉडल

प्रधान अन्वेषक का नाम: डॉ. शिल्पी सिंह दूरभाष सं. 8307591176

मैंने दिनांक_____ के सूचना पतरर में दिये गए सभी तथ्यो को पड़ लिया हैं| मुझे समझ आने वालीं भाषा मैं विस्तारपूवकरक बत्ता दिया है और मैनें तथ्यो को भली भांति समझ लिया है| मैं पुष्टि करता हूँ कि मुझे पररशन पुछने का अवसर दिया गया है|

मुझे अध्ययन की पररकृति, उद्देश्य और इसके सम्भावित लाभ/जोखिमों और अध्ययन की सम्भावित अविध अन्य पररासंगिक जानकारी के बारे में विस्तार पुवकरक समझा दिया गया है | में समझता हूँ कि इस अध्ययन में मेरी [illegible] की भगिधारी स्वेछिक है और इस अध्ययन से किसी भी समय बिना कोई कारण बताए, बिना चिकित्सा देखभाल या कानूनी अधिकारों के पररभावित हए अपना [illegible] का नाम वापिस ले सकता/सकती हूँ |

मैं समझता हूँ कि इस अनुसन्धान में मेरी सहभागिता से मेरे बारे में एकत्र जानकारी और चिकित्सीय नोटों को एम्स अस्पताल के जिम्मेदार लोगो द्वारा देखा जायेगा| मैं इन व्यक्तियों को अपने रिकोर्ड देखने कि अनुमति प्रदान करता/करती हूँ |

मैं उपयुक अध्यन में भाग लेने के लिए अपनी सहमति पररदान करता /करती हूँ |

सहभागी के हस्ताक्षर / बाएं अंगूठे का निशान दिनांक स्थान

सहभागी का नाम

पिता/पति का नाम

पूरा पता

यह प्रमाणित किया जाता हे कि उपयुर्क्त सहमति मेरी उपस्थति में ली गईं हैं |

मुख्य अन्वेषक के हस्ताक्षर दिनाक: स्थान:

१) गवाह के हस्ताक्षर
नाम
पता

२) गवाह के हस्ताक्षर
नाम
पता

ANNEXURE 5

PARTICIPANT INFORMATION SHEET (PIS)

i) Title of the Study/Project- Psychosocial factors, oral health and quality of life in adolescents - A conceptual model using life course health development perspective

ii) Aims and methods of the research.-

1. To assess various oral health conditions in adolescents – dental caries, malocclusion, dental plaque and gingivitis.

2. To assess adolescents' sense of coherence, social relationships, social support, psychosocial variables and oral health behavioural variables

3. To correlate oral conditions with adolescent sense of coherence, social variables and oral health behavioral variables

4. To assess oral health related quality of life (OHRQoL) among adolescents

5. To correlate OHRQoL with various oral conditions

6. To include the above interrelationships into a conceptual model and analyse it statistically.

iii) Expected duration of the subject participation -Since it is a cross sectional study, hence participation required only at the time of investigation.

iv) The benefits to be expected from the research to the subject or to others- developing a conceptual model to predict oral health and quality of life among adoelscents based on life course experiences.

v) Any risk to the subject associated with the study - NO

vi) Maintenance of confidentiality of records- Use of anonymous questionnaires.

vii) Provision of free treatment for research related injury- Through referral and free dental treatment at the Institute of dental studies & technologies, Modinagar.

viii) Compensation of subjects for disability or death resulting from such injury.- not required.

ix) Freedom of individual to participate and to withdraw from research at any time without penalty or loss of benefits to which the subject would otherwise be entitled.- YES

x) Amount of blood sample in quantity, in Tea Spoon Full, to be taken should be mentioned.- not required

xi) Costs and source of investigations, disposables, implants and drugs / contrast media must be mentioned. Rs. 10000/-

xii) Telephone number/contact number of Principal Investigator
Dr. Shilpi Singh +91-8307591176

xiii) In case of drug trials: a) The chemical name of the drug, date of its manufacturing and batch number must be mentioned b) Initial Bio equivalent study of the drug / references should be provided.- not required.

xiv) Self certified that translation to vernacular is accurate – YES.

xv) Statement that there is a possibility of failure of IP to provide intended therapeutic effect – N/A

xvi) Statement that in case of placebo controlled trials, the placebo administered to the subjects shall not have any therapeutic effect- N/A.

ANNEXURE - 6

प्रतिभागी सूचना पत्र (पीआईएस)

i) अध्ययन/परियोजना का शीर्षक- किशोरों में मनोसामाजिक कारक, मौखिक स्वास्थ्य और जीवन की गुणवत्ता - जीवन पाठ्यक्रम स्वास्थ्य विकास परिप्रेक्ष्य का उपयोग करते हुए एक वैचारिक मॉडल

ii) अनुसंधान के उद्देश्य और तरीके- किशोरों में विभिन्न मौखिक स्वास्थ्य स्थितियों का आकलन करने के लिए - दंत क्षय, कुरूपता, दंत पट्टिका और मसूड़े की सूजन।

2. किशोरों की सुसंगतता, सामाजिक संबंधों, सामाजिक समर्थन, मनोसामाजिक चर और मौखिक स्वास्थ्य व्यवहार चर का आकलन करने के लिए

3. किशोरों में सामंजस्य की भावना, सामाजिक चर और मौखिक स्वास्थ्य व्यवहार चर के साथ मौखिक स्थितियों को सहसंबंधित करना

4. किशोरों के बीच मौखिक स्वास्थ्य संबंधी जीवन की गुणवत्ता (ओएचआरक्यूओएल) का आकलन करना

5. ओएचआरक्यूएलओएल को विभिन्न मौखिक स्थितियों के साथ सहसंबंधित करना

6. उपरोक्त अंतर्संबंधों को एक वैचारिक मॉडल में शामिल करना और इसका सांख्यिकीय विश्लेषण करना।

iii) विषय की भागीदारी की अपेक्षित अवधि - चूंकि यह एक क्रॉस सेक्शनल अध्ययन है, इसलिए भागीदारी केवल जांच के समय आवश्यक है।

iv) अनुसंधान से विषय या अन्य के लिए अपेक्षित लाभ विकसित करना- किशोरों के बीच मौखिक स्वास्थ्य और जीवन की गुणवत्ता की भविष्यवाणी करने के लिए जीवन के पाठ्यक्रम के अनुभवों के आधार पर वैचारिक मॉडल।

v) अध्ययन से जुड़े विषय के लिए कोई जोखिम - नहीं

vi) अभिलेखों की गोपनीयता बनाए रखना - अनाम प्रश्नावली का उपयोग।

vii) अनुसंधान से संबंधित चोट के लिए मुफ्त उपचार का प्रावधान- दंत चिकित्सा अध्ययन और प्रौद्योगिकी संस्थान, मोदीनगर में रेफरल और मुफ्त दंत चिकित्सा उपचार के माध्यम से।

viii) इस तरह की चोट से होने वाली विकलांगता या मृत्यु के लिए विषयों का मुआवजा - आवश्यक नहीं है

ix) किसी भी समय किसी भी दंड या लाभों की हानि के बिना अनुसंधान से भाग लेने और वापस लेने की स्वतंत्रता जिसके लिए विषय अन्यथा हकदार होगा।- हाँ

x) मात्रा में रक्त के नमूने की मात्रा, भरे हुए चाय के चम्मच में, का उल्लेख किया जाना चाहिए। - आवश्यक नहीं

xi) जांच की लागत और स्रोत, डिस्पोजल, इम्प्लांट्स और ड्रग्स / कंट्रास्ट मीडिया का उल्लेख किया जाना चाहिए। रु. 10000/-

xii) प्रत्येक पृष्ठ के शीर्ष पर प्रधान अन्वेषक और सह अन्वेषक का टेलीफोन नंबर / संपर्क नंबर

प्रधान अन्वेषक- डॉ. शिल्पी सिंह

8307591176

xii) दवा परीक्षण के मामले में: क) दवा का रासायनिक नाम, इसके निर्माण की तारीख और बैच संख्या का उल्लेख किया जाना चाहिए ख) दवा का प्रारंभिक जैव समकक्ष अध्ययन/संदर्भ प्रदान किया जाना चाहिए।- आवश्यक नहीं

xiii) स्व प्रमाणित है कि स्थानीय भाषा में अनुवाद सटीक है।

xiv) विषयों का कोई चिकित्सीय प्रभाव नहीं होगा- आवश्यक नहीं।

ANNEXURE 7

MANAV RACHNA DENTAL COLLEGE, FARIDABAD

TITLE: Psychosocial factors, oral health and quality of life in adolescents - A conceptual model using life course health development perspective

I. DEMOGRAPHIC INFORMATION:

ENROLLMENT NO. _____

SCHOOL NO./TYPE _____

NAME (OPTIONAL) _____ AGE/SEX: _____

1. EDUCATION OF FAMILY HEAD _____
2. OCCUPATION OF FAMILY HEAD _____
3. MONTHLY FAMILY INCOME _____
4. Family type JOINT_____ NUCLEAR_____
5. Number of siblings _____
6. Birth order FIRST _____ SECOND _____ THIRD _____
   ANY OTHER _____
7. Do you brush your teeth daily? YES _____ NO _____
8. Number of times you brush your teeth MORNING_____ NIGHT_____
   BOTH _____
9. Use of oral hygiene aids YES_____NO_____
10. Mouthrinsing after every meal YES_____ NO_____
11. Have you ever visited dentist YES_____ NO_____
12. Reason for visiting dentist Regular check up _____ Treatment _____
13. Use of tobacco YES_____ NO_____

II. ANTONOVSKY SENSE OF COHERENCE SCALE

1. Do you have the feeling that you really don't care about what is going on around you?

   1 2 3 4 5 6 7

   (always) (never)

2. Has it happened in the past that you were surprised by the behaviour of people whom you thought you knew well?

   1 2 3 4 5 6 7

   (always) (never)

3. Has it happened that people whom you counted on disappointed you?

   1 2 3 4 5 6 7

   (always) (never)

4. Until now your life has had: no clear goals – very clear goals and purpose

   1 2 3 4 5 6 7

   (no clear goals) (very clear goals and purpose)

5. Do you have the feeling that you are being treated unfairly?

   1 2 3 4 5 6 7

   (always) (never)

6. Do you have the feeling that you are in an unfamiliar situation and don't know what to do?

   1 2 3 4 5 6 7

   (always) (never)

7. Doing the things you do every day is: –

   1 2 3 4 5 6 7

   (a source of pain and boredom) (a source of deep pleasure and satisfaction)

8. Do you have very mixed-up feelings and ideas?

   1 2 3 4 5 6 7

   (always) (never)

9. Does it happen that you experience feelings that you would rather not have to endure?

   1 2 3 4 5 6 7

   (always) (never)

10. Many people, even those with a strong character, sometimes feel like losers in certain situations. How often have you felt this way in the past?

1 2 3 4 5 6 7

(always) (never)

11. When certain events occurred, have you generally found that: –

1 2 3 4 5 6 7

(you overestimated or underestimated their importance) (you assessed the situation correctly)

12. How often do you have the feeling that there is little meaning in the things you do in your daily life?

1 2 3 4 5 6 7

(always) (never)

13. How often do you have feelings that you are not sure you can control?

1 2 3 4 5 6 7

(always) (never)

III. PARENTAL SUPPORT/PUNISHMENT QUESTIONNAIRE

Mother:

1. How much did she understand your problems and your worries?
   1=Not at all 2=a little 3=Quite a lot 4=a great deal.
2. How much could you confide in her about things that were bothering you?
   1=Not at all 2=a little 3=Quite a lot 4=a great deal.
3. How much love and affection did she give you?
   1=Not at all 2=a little 3=Quite a lot 4=a great deal.
4. How much time and attention did she give you when you needed it?
   1=Not at all 2=a little 3=Quite a lot 4=a great deal.
5. How strict was she with her rules for you?
   1=Not at all 2=a little 3=Quite a lot 4=a great deal.
6. How harsh was she when she punished you?
   1=Not at all 2=a little 3=Quite a lot 4=a great deal.
7. How much did she expect you to do your best in everything you did?
   1=Not at all 2=a little 3=Quite a lot 4=a great deal.

Father:

8. How much did he understand your problems and your worries?

   1=Not at all 2=a little 3=Quite a lot 4=a great deal.

9. How much could you confide in him about things that were bothering you?

   1=Not at all 2=a little 3=Quite a lot 4=a great deal.

10. How much love and affection did he give you?

    1=Not at all 2=a little 3=Quite a lot 4=a great deal.

11. How much time and attention did he give you when you needed it?

    1=Not at all 2=a little 3=Quite a lot 4=a great deal.

12. How strict was he with his rules for you?

    1=Not at all 2=a little 3=Quite a lot 4=a great deal.

13. How harsh was he when he punished you?

    1=Not at all 2=a little 3=Quite a lot 4=a great deal.

14. How much did he expect you to do your best in everything you did?

    1=Not at all 2=a little 3=Quite a lot 4=a great deal.

IV. TOBACCO USE QUESTIONNAIRE

1. Have you heard about tobacco? **Yes** **No**

2. What are the forms you know of?

Beedi

Cigarette

Gutka

Pan masala

Zarda

Chutta

Dhumti

Khaini

Mishri, gul, bajjar, snuff

Others(Hookah, Cigars, Pipe, Ganja,Chillum etc.)

3. Have you ever used tobacco or its products? Yes No

(If Yes, go to Q.4, If No, go to Q.16)

4. Reason for tobacco use

Out of curiosity

Fun with friends

Confidence

Stress relief

Macho/ Sophisticated appearance

5. Pattern of tobacco use Smoker Chewer Both

6. Age of initiation (year) of tobacco use < 10 10-15 Never

7. If smoker, Duration of smoking <1 yr 1-3 yr >3 yr Never

8. Frequency of smoking Everyday Every week Every month Rarely

9. Type of smoking

Beedi

Cigarette – Filtered / Non-filtered

Others(Hookah, Cigars, Pipe, Ganja, Chillum etc.)

Never smoked

10. Type of tobacco chewing

Pan Masala

Gutka

Zarda

Snuff

Combined

Never tobacco chewers

11. Type of tobacco user Past Present Never user

12. Who influenced you for tobacco use ?

Peer pressure

Family atmosphere

Personal setback

Media

Stress

13. How did you usually get your own tobacco products?

I did not smoke tobacco products

I bought them in a store, shop or from a street vendor

I gave someone else money to buy them for me

I borrowed them from someone else

I stole them

An older person gave them to me

I got them some other way

14. Did anyone ever refuse to sell you tobacco products because of your age?

I did not try to buy tobacco products

Yes, someone refused to sell me tobacco products because of my age

No, my age did not keep me from buying tobacco products

15. Place of your tobacco use.

I have never used tobacco

At home

At school

At friends' houses

At social events

In public spaces (e.g. parks, shopping centres, street corners)

Other

16. Do your parents/ siblings smoke or use tobacco products?

None

Both

Father only

Mother only

Sibling/s

I don't know

17. Do you know the harmful effects of tobacco?

Cancer

Heart disease

Dirty teeth

Gum problems

18. Has anyone in your family discussed the harmful effects of tobacco use with you?

Yes No

19. Have you seen or heard about anti-tobacco media messages? Yes No

20. What are the sources of information for anti-tobacco media messages?

Television

Radio

Billboards

Posters

Newspapers

Magazines

Movies

V. CHILD PERCEPTION QUESTIONNAIRE

These next few questions are about how you feel about your teeth. There are no "right" or "wrong" answers- please answer as best you can. Please **circle** the option which applies to you.

1. **Would you say the health of your teeth, lips, jaws and mouth is:**

Excellent Very Good Good Fair Poor

2**. How much does the condition of your teeth, lips, jaws or mouth affect your life overall?**

Not at all Very little Some A lot Very much

In the past 3 months, how often have you had:

3. **Pain in your teeth, lips, jaws or mouth?**

Never Once or twice Sometimes Often Every day almost every day

4. **Bleeding gums?**

Never Once or twice Sometimes Often Every day almost every day

5. **Sores in your mouth?**

Never Once or twice Sometimes Often Every day almost every day

6. **Bad Breath?**

Never Once or twice Sometimes Often Every day almost every day

7. **Food stuck in between your teeth?**

Never Once or twice Sometimes Often Every day almost every day

8. **Food stuck in the top of your mouth**

Never Once or twice Sometimes Often Every day almost every day

For the next questions, Has this happened because of your teeth, lips or mouth?

In the past 3 months, how often have you had:

9. **Breathed through your mouth?**

Never Once or twice Sometimes Often Every day almost every day

10. **Taken longer than others to eat a meal?**

Never Once or twice Sometimes Often Every day almost every day

11. **Had trouble sleeping?**

Never Once or twice Sometimes Often Every day almost every day

In the past 3 months, because of your teeth, lips, mouth or jaws, how often has it been:

12. **Difficulty to bite or chew food like apples, corn on the cob or steak?**

Never Once or twice Sometimes Often Every day almost every day

13. **Difficult to open your mouth wide?**

Never Once or twice Sometimes Often Every day almost every day

14. **Difficulty to say any words?**

Never Once or twice Sometimes Often Every day almost every day

15. **Difficult to eat foods you would like to eat?**

Never Once or twice Sometimes Often Every day almost every day

16**. Difficult to drink with a straw?**

Never Once or twice Sometimes Often Every day almost every day

17. **Difficult to drink or eat hot or cold foods?**

Never Once or twice Sometimes Often Every day almost every day

QUESTIONS ABOUT FEELINGS

Have you had feelings because of your teeth, lips or mouth? If you felt this way for another reason, answer 'Never'.

In the past 3 months, how often have you had:

18**. Felt irritable or frustrated?**

Never Once or twice Sometimes Often Every day almost every day

19. **Felt unsure of yourself?**

Never Once or twice Sometimes Often Every day almost every day

20. **Felt shy or embarrassed?**

Never Once or twice Sometimes Often Every day almost every day

21. **Been concerned what other people think about your teeth, lips, mouth or jaws?**

Never Once or twice Sometimes Often Every day almost every day

22. **Worried that you are not as good-looking as others?**

Never Once or twice Sometimes Often Every day almost every day

23. **Been upset?**

Never Once or twice Sometimes Often Every day almost every day

24. **Felt nervous or afraid?**

Never Once or twice Sometimes Often Every day almost every day

25. **Worried that you are not as healthy as others?**

Never Once or twice Sometimes Often Every day almost every day

26. **Worried that you are different than other people?**

Never Once or twice Sometimes Often Every day almost every day

QUESTIONS ABOUT SCHOOL

Have you had these experiences because of your teeth, lips or mouth? If it was for another reason, answer 'Never'.

In the past 3 months, how often have you had:

27. **Missed school because of pain, appointments or surgery?**

Never Once or twice Sometimes Often Every day almost every day

28. **Had a hard time paying attention in school?**

Never Once or twice Sometimes Often Every day almost every day

29. **Had difficulty doing your homework?**

Never Once or twice Sometimes Often Every day almost every day

30. **Not wanted to speak or read out loud in class?**

Never Once or twice Sometimes Often Every day almost every day

QUESTIONS ABOUT YOUR SPARE-TIME ACTIVITIES AND BEING WITH OTHER PEOPLE

In the past 3 months, how often have you had:

31. **Avoided taking part in activities like sports, clubs, drama, music, school trips?**

Never Once or twice Sometimes Often Every day almost every day

32. **Not wanted to talk to other children?**

Never Once or twice Sometimes Often Every day almost every day

33. **Avoided smiling or laughing when around other children?**

Never Once or twice Sometimes Often Every day almost every day

34. **Had difficulty playing a musical instrument such as a recorded, flute, clarinet, and trumpet?**

Never Once or twice Sometimes Often Every day almost every day

35. **Not wanted to spend time with other people?**

Never Once or twice Sometimes Often Every day almost every day

36. **Argued with other children or your family?**

Never Once or twice Sometimes Often Every day almost every day

In the past 3 months, because of your teeth, lips, mouth or jaws, how often have:

37. **Other children teased you or called you names?**

Never Once or twice Sometimes Often Every day almost every day

38. **Other children made you feel left out?**

Never Once or twice Sometimes Often Every day almost every day

39. **Other children ask you questions about your teeth, lips, jaws or mouth?**

Never Once or twice Sometimes Often Every day almost every day

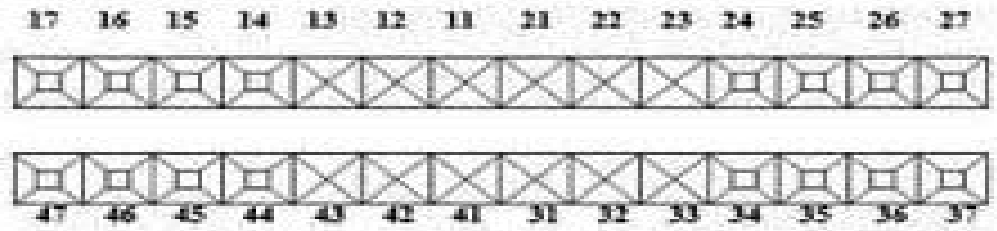
VI. ORAL EXAMINATION

TDI: (Permanent Incisors)

Present: Tooth_____ Ellis Class_____

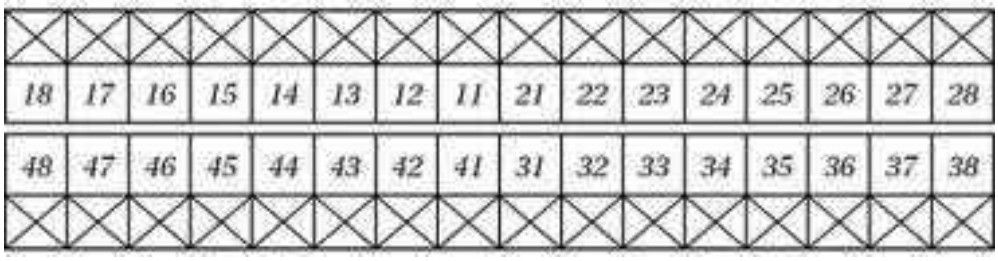
Absent _____

DMFS index:



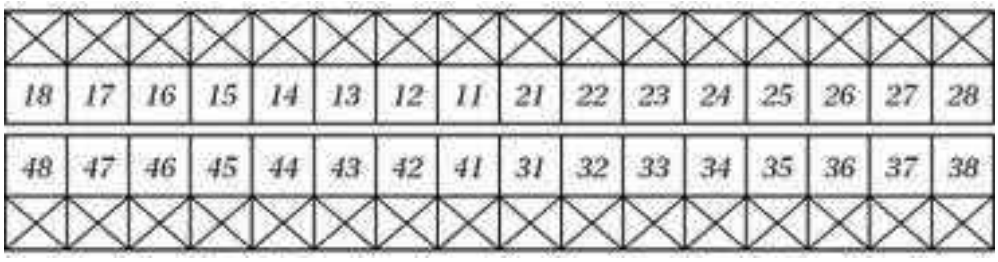
DS=____ MS=_____ FS=_____ DMFS=_____

PI:



PI Score=

MGI:



MGI Score=

IOTN index: DHC Grade _____ Treatment _____

AC Grade_____ Treatment _____

मानव रचना डेंटल कॉलेज, फरीदाबाद

शीर्षक: किशोरों में मनोसामाजिक कारक, मौखिक स्वास्थ्य और जीवन की गुणवत्ता - जीवन पाठ्यक्रम स्वास्थ्य विकास परिप्रेक्ष्य का उपयोग करते हुए एक वैचारिक मॉडल

I. जनसांख्यिकीय जानकारी:

नामांकन संख्या _____

स्कूल संख्या / प्रकार _____

नाम (वैकल्पिक) _____ आयु/लिंग: _____

1. परिवार के मुखिया की शिक्षा _____
2. परिवार के मुखिया का व्यवसाय _____
3. मासिक पारिवारिक आय _____
4. परिवार का प्रकार JOINT_____ NUCLEAR_____
5. सहोदरों की संख्या _____
6. जन्म क्रम पहला _____ दूसरा _____ तीसरा _____ कोई अन्य _____
7. क्या आप रोजाना अपने दांतों को ब्रश करते हैं? हाँ नही _____
8. आप अपने दांतों को कितनी बार ब्रश करते हैं सुबह_____ रात_____ दोनों _____
9. मौखिक स्वच्छता सहायक का उपयोग हाँ____ नहीं_____
10. प्रत्येक भोजन के बाद मुँह धोना हाँ____ नहीं_____
11. क्या आप कभी दंत चिकित्सक के पास गए हैं हाँ_____ नहीं_____
12. दंत चिकित्सक के पास जाने का कारण नियमित जांच _____ उपचार _____
13. तम्बाकू का प्रयोग हाँ____ नहीं_____

II एंटोनोव्स्की सुसंगतता पैमाने की भावना

1. क्या आपको लगता है कि आप वास्तव में परवाह नहीं करते हैं कि आपके आसपास क्या हो रहा है?

   हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

2. क्या अतीत में ऐसा हुआ है कि आप उन लोगों के व्यवहार से आश्चर्यचकित थे जिन्हें आपने सोचा था कि आप अच्छी तरह से जानते हैं?

   हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

3. क्या ऐसा हुआ है कि जिन लोगों पर आप भरोसा करते थे, उन्होंने आपको निराश किया?

   हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

4. अब तक आपके जीवन में: कोई स्पष्ट लक्ष्य नहीं है - बहुत स्पष्ट लक्ष्य और उद्देश्य

हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

5. क्या आपको लगता है कि आपके साथ गलत व्यवहार किया जा रहा है?

हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

6. क्या आपको लगता है कि आप एक अपरिचित स्थिति में हैं और नहीं जानते कि क्या करना है?

हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

7. उन चीजों को करना जो आप हर दिन करते हैं: गहरी खुशी और संतुष्टि का स्रोत - दर्द और बोरियत का स्रोत

हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

8. क्या आपके पास बहुत मिश्रित भावनाएं और विचार हैं?

हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

9. क्या ऐसा होता है कि आप उन भावनाओं का अनुभव करते हैं जिन्हें आपको सहन नहीं करना पड़ेगा?

हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

10. बहुत से लोग, यहां तक कि एक मजबूत चरित्र वाले लोग, कभी-कभी कुछ स्थितियों में हारने वाले की तरह महसूस करते हैं। अतीत में आपने कितनी बार ऐसा महसूस किया है?

हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

11. जब कुछ घटनाएं हुईं, तो क्या आपने आम तौर पर पाया है कि: आपने उनके महत्व को कम या कम करके आंका - आपने स्थिति का सही आकलन किया?

हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

12. आप कितनी बार महसूस करते हैं कि आपके दैनिक जीवन में जो चीजें आप करते हैं, उनमें बहुत कम अर्थ है?

हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

13. आपके पास कितनी बार ऐसी भावनाएं होती हैं जिन्हें आप सुनिश्चित नहीं करते हैं कि आप नियंत्रित कर सकते हैं?

हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

III. माता-पिता का समर्थन / सजा प्रश्नावली

1. क्या आपको लगता है कि आपके माता-पिता आप पर भरोसा करते हैं?

   माँ: हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

   पिता: हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

2. क्या आपको लगता है कि आपके माता-पिता आपसे प्यार करते हैं?

   माँ: हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

   पिता: हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

3. क्या आपके माता-पिता आपके व्यक्तिगत और शैक्षणिक मामलों पर ध्यान देते हैं?

   माँ: हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

   पिता: हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

4. क्या आपके माता-पिता आपको समझते हैं और आपका समर्थन करते हैं?

   माँ: हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

   पिता: हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

5. क्या आपके माता-पिता आपके साथ सख्ती से व्यवहार करते हैं?

   माँ: हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

   पिता: हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

6. जब भी कुछ गलत होता है तो क्या आपके माता-पिता आपको दंडित करते हैं?

   माँ: हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

   पिता: हमेशा_____ अक्सर_____ कभी-कभी_____ कभी नहीं _____

IV. तंबाकू उपयोग प्रश्नावली

1. **क्या आपने तंबाकू के बारे में सुना है?** हाँ नहीं

2. **आप किन रूपों के बारे में जानते हैं?**

   बीड़ी
   सिगरेट
   गुटखा
   पान मसाला
   Zarda
   चुट्टा
   धूमती
   खैनी
   मिश्री, गुल, बज्जर, स्नफ
   अन्य (हुक्का, सिगार, पाइप, गांजा, चिलम आदि)

3. **क्या आपने कभी तंबाकू या उसके उत्पादों का उपयोग किया है?** हाँ नहीं

   (यदि हाँ, तो Q.4 पर जाएँ, यदि नहीं, तो Q.16 पर जाएँ)

4. **तंबाकू के उपयोग का कारण**

   जिज्ञासा के कारण दोसतों के साथ मज़ा विश्वास
   तनाव से राहत माचो / परिषकृत उपसिथित

5. **तंबाकू के उपयोग का पैटनर** समोकर चयूअर दोनों

6. **तंबाकू के उपयोग की शुरुआत की आयु (वर्ष)** < 10 10-15 कभी नहीं

7. **यदि धूम्रपान करने वाला है, तो धूम्रपान** की अवधि 1 वर्ष 1-3 वर्ष >3 वर्ष < कभी नहीं

8. **हर हफ्ते हर महीने धूम्रपान की आवृत्ति** शायद ही कभी

9. **धूम्रपान के प्रकार**

   बीड़ी
   सिगरेट - फ़िलटर किया गया /
   अनय (हुकका, सिगार, पाइप, गांजा, चिलम आदि) कभी धूम्रपान नहीं किया

10. **तंबाकू चबाने के प्रकार** पान मसाला गुटखा Zarda

11. **तंबाकू उपयोगकतार का प्रकार** अतीत वतरमान कभी उपयोगकतार नहीं है

12. **तंबाकू के उपयोग के लिए आपको किसने प्रभावित किया?**

    सहकर्मी का दबाव परिवार का माहौल वयक्तिगत झटका मीडिया तनाव

13. आप आमतौर पर अपने स्वयं के तंबाकू उत्पाद कैसे प्राप्त करते हैं?

मैं तंबाकू उत्पादों का धूम्रपान नहीं करता था
मैंने उन्हें एक दुकान, दुकान या सड़क विक्रेता से खरीदा था।
मैंने किसी और को उन्हें अपने लिए खरीदने के लिए पैसे दिए।
मैंने उन्हें किसी और से उधार लिया
मैंने उन्हें चुरा लिया
एक बूढ़े व्यक्ति ने उन्हें मुझे दिया
मैंने उन्हें किसी और तरीके से पकड़ा

14. कया कभी किसी ने आपकी उम्र के कारण आपको तंबाकू उतपाद बेचने से मना कर दया?

मैंने तंबाकू उत्पादों को खरीदने की कोशिश नहीं की।
हां, किसी ने मेरी उम्र के कारण मुझे तंबाकू उत्पाद बेचने से इनकार कर दिया
नहीं, मेरी उम्र ने मुझे तंबाकू उत्पाद खरीदने से नहीं रोका

15. आपके तंबाकू के उपयोग का स्थान।

सकूल में घर पर दोसतों के घर सामाजिक कायरक्रमों में
सावरजिनक सथानों में (जैसे पाकर, शॉपिंग सेंटर, सड़क के कोने) दूसरा
मने कभी तंबाकू का इस्तेमाल नह कया।

16. क्या आपके माता-पिता / भाई-बहन धूम्रपान करते हैं या तंबाकू उत्पादों का उपयोग करते हैं?

कोई नहीं दोनों केवल पिता केवल माँ भाई/बहन/s मुझे नहीं पता

17. क्या आप तंबाकू के हानिकारक प्रभावों को जानते हैं?

कैंसर दिल की बीमारी गंदे दांत मसूड़ों की समसया

18. क्या आपके परिवार में किसी ने आपके साथ तंबाकू के उपयोग के हानिकारक प्रभावों पर चर्चा की है? हाँ नहीं

19. क्या आपने तंबाकू विरोधी मीडिया संदेशों के बारे में देखा या सुना है? हाँ नहीं

20. तंबाकू विरोधी मीडिया संदेशों के लिए जानकारी के स्रोत क्या हैं?

दूरदश होर्डिंग पोस्टर समाचार पत्र

फिल्मों पत्रिकाओ

V. बाल धारणा प्रश्नावली

ये अगले कुछ प्रश्न इस बारे में हैं कि आप अपने दांतों के बारे में कैसा महसूस करते हैं। कोई "सही" या "गलत" उत्तर नहीं हैं- कृपया जितना संभव हो उतना उत्तर दें। कृपया उस विकल्प को **<u>सर्कल</u>** करें जो आप पर लागू होता है।

1. **क्या आप कहेंगे कि आपके दांतों, होंठों, जबड़े और मुंह का स्वास्थ्य क्या है?**

उत्कृष्ट बहुत अच्छा अच्छा ठीक खराब

2. **आपके दांतों, होंठों, जबड़ों या मुंह की स्थिति आपके जीवन को समग्र रूप से कितना प्रभावित करती है?**

बिल्कुल भी नहीं बहुत कम कुछ बहुत कुछ

पिछले 3 महीनों में, आपने कितनी बार मह्सूस किया है:

3. **आपके दांतों, होंठों, जबड़ों या मुंह में दर्द?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

4. **मसूड़ों से खून आना?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

5. **आपके मुंह में घाव?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

6. **बुरी सांस?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

7. **आपके दांतों के बीच में फंसा हुआ भोजन?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

8. **भोजन आपके मुंह के शीर्ष में फंस जाता** है

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

<u>अगले प्रश्नों के लिए</u>

<u>क्या यह आपके दांतों, होंठों या मुंह के कारण हुआ है?</u>

पिछले 3 महीनों में, आपने कितनी बार किया है:

9. **अपने मुंह से सांस ली?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

10. **भोजन खाने के लिए दूसरों की तुलना में अधिक समय लगता है?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

11. **सोने में परेशानी हुई?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

<u>पिछले 3 महीनों में, आपके दांतों, होंठों, मुंह या जबड़ों के कारण, यह कितनी बार रहा है:</u>

12. **सेब, मकई जैसे भोजन को काटने या चबाने में कठिनाई?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

13. **अपना मुंह चौड़ा खोलना मुश्किल है?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

14. **किसी भी शब्द को कहने में कठिनाई?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

15. **उन खाद्य पदार्थों को खाने में मुश्किल है जिन्हें आप खाना चाहते हैं?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

16. **तिनके के साथ पीना मुश्किल है?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

17. **गर्म या ठंडे खाद्य पदार्थ पीना या खाना मुश्किल है?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

भावनाओं के बारे में प्रश्न

क्या आपको अपने दांतों, होंठों या मुंह के कारण भावनाएं हुई हैं? यदि आपको किसी अन्य कारण से ऐसा महसूस हुआ, तो जवाब दें 'कभी नहीं.

पिछले 3 महीनों में, आपने कितनी बार महसूस किया है:

18. **चिड़चिड़ा या निराश महसूस किया?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

19. **खुद के बारे में अनिश्चित महसूस किया?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

20. **शर्मिंदा महसूस किया?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

21. **चिंतित हैं कि अन्य लोग आपके दांतों, होंठों, मुंह या जबड़ों के बारे में क्या सोचते हैं?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

22. **चिंतित हैं कि आप दूसरों की तरह अच्छे नहीं दिख रहे हैं?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

23. **परेशान हैं?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

24. **घबराहट या डर महसूस हुआ?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

25. **चिंतित हैं कि आप दूसरों की तरह स्वस्थ नहीं हैं?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

26. **चिंतित हैं कि आप अन्य लोगों की तुलना में अलग हैं?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

स्कूल के बारे में प्रश्न

<u>क्या आपको अपने दांतों, होंठों या मुंह के कारण ये अनुभव हुए हैं? यदि यह किसी अन्य कारण से था, तो जवाब दें 'कभी नहीं.</u>

पिछले 3 महीनों में, आपने कितनी बार किया है:

27. **दर्द, अपॉइंटमेंट या सर्जरी के कारण स्कूल छूट गया?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

28. **स्कूल में ध्यान देने में कठिनाई हुई?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

29. **अपना होमवर्क करने में कठिनाई हुई?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

30. **कक्षा में जोर से बोलना या पढ़ना नहीं चाहता था?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

आपकी खाली समय की गतिविधियों और अन्य लोगों के साथ होने के बारे में प्रश्न

पिछले 3 महीनों में, आपने कितनी बार किया है:

31. **खेल, क्लब, नाटक, संगीत, स्कूल यात्रा जैसी गतिविधियों में भाग लेने से बचें?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

32. **अन्य बच्चों से बात नहीं करना चाहते?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

33. **अन्य बच्चों के आसपास मुस्कुराते या हंसने से बचें?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

34. **रिकॉर्डर, बांसुरी, शहनाई और तुरही जैसे संगीत वाद्ययंत्र बजाने में कठिनाई हुई?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

35. **अन्य लोगों के साथ समय बिताना नहीं चाहते थे?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

36. **अन्य बच्चों या अपने परिवार के साथ बहस?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

पिछले 3 महीनों में, आपके दांतों, होंठों, मुंह या जबड़ों के कारण, कितनी बार होता है:

37. **अन्य बच्चों ने आपको चिढ़ाया?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

38. **अन्य बच्चों ने आपको खुद को अकेला महसूस कराया?**

कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

39. **अन्य बच्चे आपसे आपके दांतों, होंठों, जबड़ों या मुंह के बारे में सवाल पूछते हैं?**

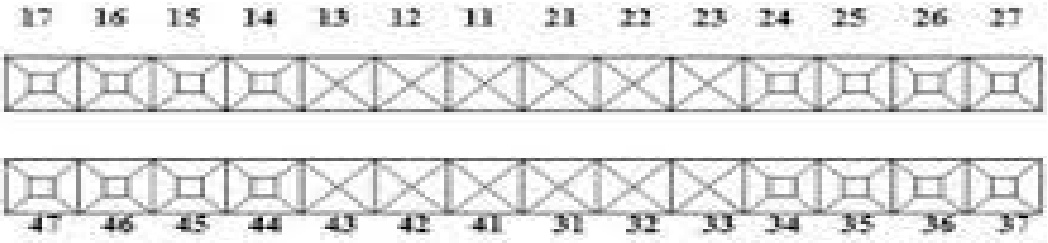
कभी भी एक या दो बार कभी-कभी अक्सर हर दिन लगभग हर दिन

VI. मौखिक परीक्षा

TDI: (Permanent Incisors) Present: Tooth_____ Ellis Class_____

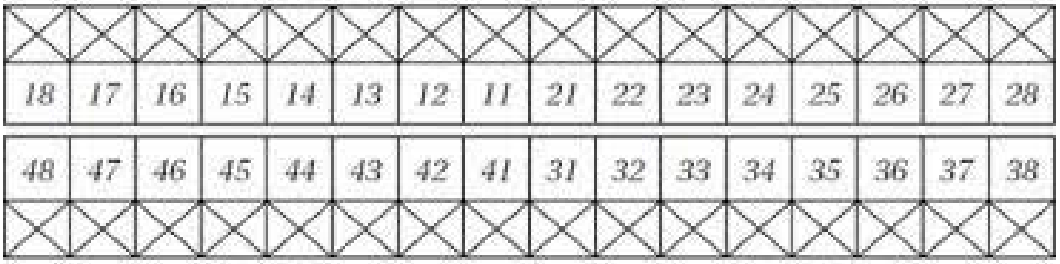
Absent _____

DMFS index:



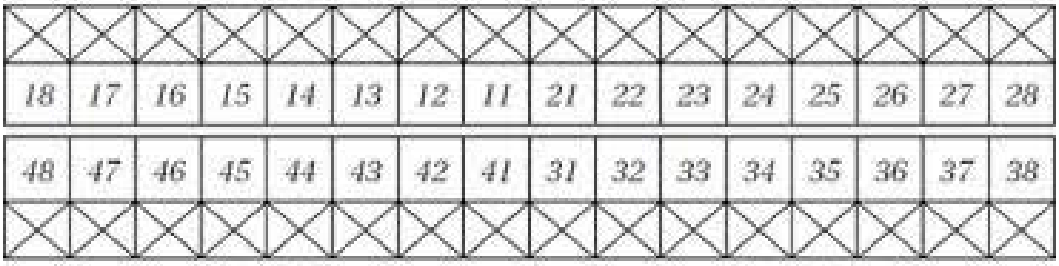
DS=____ MS=_____ FS=_____ DMFS=_____

PI:



PI Score=

MGI:



MGI Score=

IOTN index: DHC Grade _____ Treatment _____

AC Grade_____ Treatment _____